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1. JP.05-002385,U(1993)
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CLAIMS DETAILED DESCRIPTION  
TECHNICAL FIELD PRIOR ART EFFECT  
OF THE INVENTION TECHNICAL  
PROBLEM MEANS OPERATION  
EXAMPLE DESCRIPTION OF DRAWINGS  
DRAWINGS

[Translation done.]

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#### DETAILED DESCRIPTION

[Detailed explanation of a design]  
[0001]

[Industrial Application]

This design starts the technique which makes connection resilience sufficient thing with the splicing fitting of the same components in detail, and is made into \*\* about the structure of connecting the connector mounted in the printed wired board.

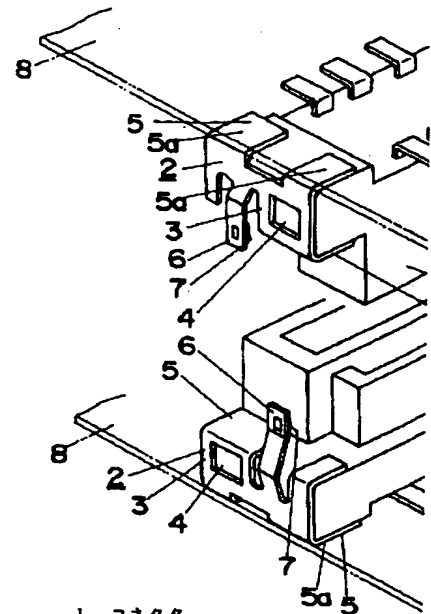
[0002]

[Description of the Prior Art]

As shown in drawing 3 (a) and (b), engagement hole 4b is formed in splicing fitting 2b with which engagement heights 7a was formed in splicing fitting 2a, and while it was attached in the connector 1 was attached in the connector 1 of another side, the deer of the connection structure of the former and a connector is carried out to it, and it is engaging engagement heights 7a with engagement hole 4b, and it connects splicing fitting 2a and 2b, and connects a connector 1 and one comrades. Moreover, as shown in drawing 4 (a) and (b), the thing of a

Drawing selection

Representative drawing ▾



- 1 コネクタ
- 2 接続金具
- 3 中央片
- 4 係合孔
- 5 脚片
- 6 起立接続片
- 7 係合凸部

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**CLAIMS**

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[Utility model registration claim]

[Claim 1] An engagement hole is drilled in the central piece in one flank of the die-length direction of the splicing fitting formed in the KO character type, a part of piece of a foot in the other flanks of the die-length direction of splicing fitting stands up to abbreviation parallel at a central piece, a standing-up connection piece is formed, engagement heights are formed in the point of this standing-up connection piece, and it counters. Connection structure of the connector which connects the connector which the above-mentioned KO character type splicing fitting is supported from under by the edge of the connector connected electrically, and the engagement heights of a mounting eclipse and the standing-up connection piece of the splicing fitting of one connector engage with the engagement hole of the central piece of the splicing fitting of the connector of another side, and counters, and changes.

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DETAILED DESCRIPTION

---

[Detailed explanation of a design]

[0001]

[Industrial Application]

This design starts the technique which makes connection resilience sufficient thing with the splicing fitting of the same components in detail, and is made into \*\* about the structure of connecting the connector mounted in the printed wired board.

[0002]

[Description of the Prior Art]

As shown in drawing 3 (a) and (b), engagement hole 4b is formed in splicing fitting 2b with which engagement heights 7a was formed in splicing fitting 2a, and while it was attached in the connector 1 was attached in the connector 1 of another side, the deer of the connection structure of the former and a connector is carried out to it, and it is engaging engagement heights 7a with engagement hole 4b, and it connects splicing fitting 2a and 2b, and connects a connector 1 and one comrades. Moreover, as shown in drawing 4 (a) and (b), the thing of a configuration of carrying out push-in engagement in the engagement slot d on the other party is also proposed [ piece / c / nothing in the same configuration, and mutual / push-in ] in splicing fitting 2c and 2c.

[0003]

[Problem(s) to be Solved by the Device]

However, although connection resilience can be raised in what is shown in drawing 3 (a) and (b) by carrying out engagement connection of splicing fitting 2a and the 2bs Become the components with which splicing fitting 2a differs from 2b, and anchoring to the connectors 1 and 1 of splicing fitting 2a and 2b takes caution. Components mark also had to take the measure which raises increase, splicing fitting 2a to connectors 1 and 1, and the anchoring reinforcement of 2b against connector 1 and 1 side, and had the problem that the configuration of connectors 1 and 1 became complicated etc. Moreover, in what is shown in drawing 4 (a) and (b), although splicing fitting 2c and 2c was made into the same configuration, in the range of the board thickness of splicing fitting 2c and 2c, push-in junction of the splicing fitting 2c and 2c is carried out, connection resilience fell with dispersion in board thickness, or dispersion of a fitting location, and there was a problem of being fully hard to raise connection resilience.

[0004]

This design tends to solve such a problem and the place made into the object is to offer the connection structure of the connector as for which connection resilience is made to sufficient thing with the splicing fitting used as the same components.

[0005]

[Means for Solving the Problem]

The engagement hole 4 is drilled in the central piece 3 in one flank of the die-length direction of the splicing fitting 2 with which this design was formed in the KO character type. A part of piece 5 of a foot in the other flanks of the die-length direction of splicing fitting 2 stands up to abbreviation parallel at the central piece 3, and the standing-up connection piece 6 is formed. The above-mentioned KO character type splicing fitting 2 is supported from under by the edge of the connectors 1 and 1 which the engagement heights 7 are formed in the point of this standing-up connection piece 6, and are electrically connected to it face to face. A mounting eclipse. It is characterized by connecting the connectors 1 and 1 which the engagement heights 7 of the standing-up connection piece 6 of the splicing fitting 2 of one connector 1 engage with the engagement hole 4 of the central piece 3 of the splicing fitting 2 of the connector 1 of another side, and counter, and changing.

[0006]

[Function]



Thus, the engagement hole 4 is drilled in the central piece 3 in one flank of the die-length direction of the splicing fitting 2 formed in the KO character type. A part of piece 5 of a foot in the other flanks of the die-length direction of splicing fitting 2 stands up to abbreviation parallel at the central piece 3, and the standing-up connection piece 6 is formed. The above-mentioned KO character type splicing fitting 2 is supported from under by the edge of the connectors 1 and 1 which the engagement heights 7 are formed in the point of this standing-up connection piece 6, and are electrically connected to it face to face. A mounting eclipse, Because the engagement heights 7 of the standing-up connection piece 6 of the splicing fitting 2 of one connector 1 engage with the engagement hole 4 of the central piece 3 of the splicing fitting 2 of the connector 1 of another side That is, forming splicing fitting 2 in a KO character type, making a connector 1 support from under, and making anchoring reinforcement to the connector 1 of splicing fitting 2 into sufficient thing The configuration of splicing fitting 2 is made into the same configuration, and, and yet, connection resilience also makes sufficient thing the engagement heights 7 of the standing-up connection piece 6 by engaging with the engagement hole 4 of the central piece 3.

[0007]

[Example]

Splicing fitting 2 curves a metal plate to a KO character type, and is formed. The engagement hole 4 is drilled in the central piece 3 in one flank of the die-length direction of splicing fitting 2. A part of piece 5 of a foot in the other flanks of the die-length direction of splicing fitting 2 stands up to abbreviation parallel at the central piece 3, and the standing-up connection piece 6 is formed. The engagement heights 7 are formed in the point of this standing-up connection piece 6.

Splicing fitting 2 is attached in the edge of a connector 1. In this case, it controls that a connector 1 is removed from a printed wired board 8 as field 5a of the piece 5 of a foot of splicing fitting 2 is made flat-tapped with the soldering side to the printed wired board 8 in a connector 1 and the anchoring reinforcement to the printed wired board 8 of a connector 1 is raised with soldering field 5a of this piece 5 of a foot to a printed wired board 8.

[0008]

The connectors 1 and 1 which carry out a deer and the connectors 1 and 1 mounted in the printed wired board 8 are made to counter, and the engagement heights 7 of the standing-up connection piece 6 of the splicing fitting 2 of the edge are made to engage with the engagement hole 4 of the central piece 3 of the splicing fitting 2 of the connector 1 of another side, and counter are connected. In this case, connectors 1 and 1 are connected electrically. And the ground function between printed wired boards 8 is achieved by connection of splicing fitting 2 and two comrades. Moreover, in the insert and remove of splicing fitting 2 and two comrades, splicing fitting 2 prevents exfoliation of soldering in a connector 1.

[0009]

Thus, form splicing fitting 2 in a KO character type, a connector 1 is made to support from under, and anchoring reinforcement to the connector 1 of splicing fitting 2 is made into sufficient thing, and the configuration of splicing fitting 2 was made into the same configuration, and components mark are mitigated. Moreover, connection resilience also makes sufficient thing the engagement heights 7 of the standing-up connection piece 6 by engaging with the engagement hole 4 of the central piece 3.

[0010]

[Effect of the Device]

An engagement hole is drilled in the central piece in one flank of the die-length direction of the splicing fitting with which this design was formed in the KO character type as mentioned above. A part of piece of a foot in the other flanks of the die-length direction of splicing fitting stands up to abbreviation parallel at a central piece, and a standing-up connection piece is formed. The above-mentioned KO character type splicing fitting is supported from under by the edge of the connector which engagement heights are formed in the point of this standing-up connection piece, and is electrically connected to it face to face. A mounting eclipse, Since the engagement heights of the standing-up connection piece of the splicing fitting of one connector engage with the engagement hole of the central piece of the splicing fitting of the connector of another side That is, form splicing fitting in a KO character type, make a connector support from under, and though nothing to sufficient thing, the anchoring reinforcement to the connector of splicing fitting There is an advantage that the configuration of splicing fitting is made to the same configuration, and and yet the engagement heights of a standing-up connection piece are made also as for the connection resilience of a connector to sufficient thing by engaging with the engagement hole of a central piece.



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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] It is the decomposition perspective view of one example of this design.

[Drawing 2] It is the fragmentary sectional view of a connection condition same as the above.

[Drawing 3] (a) and (b) are the decomposition perspective view of the conventional example, and the fragmentary sectional view of a connection condition.

[Drawing 4] (a) and (b) are the perspective view of other conventional examples, and the side elevation of a connection condition.

[Description of Notations]

1 Connector

2 Splicing Fitting

3 Central Piece

4 Engagement Hole

5 Piece of Foot

6 Standing-Up Connection Piece

7 Engagement Heights

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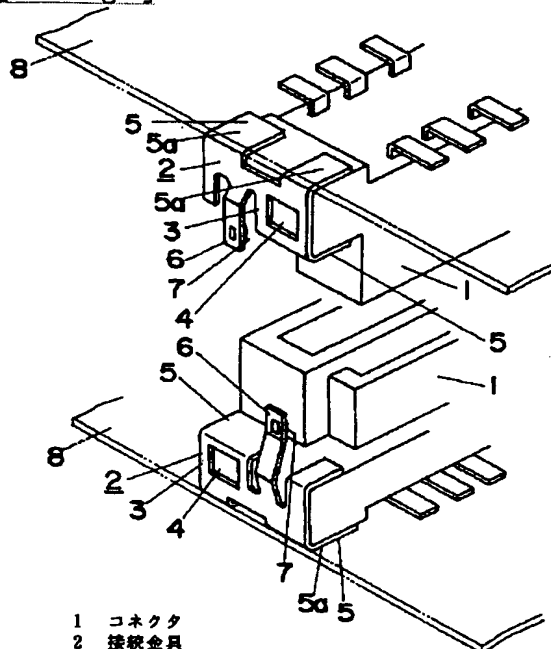
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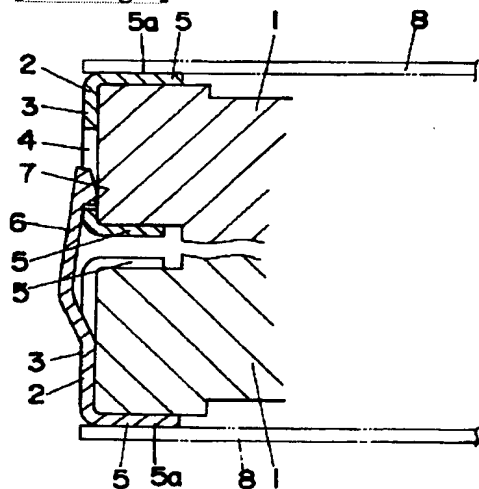
## DRAWINGS

[Drawing 1]



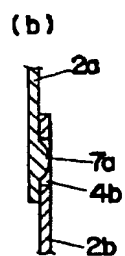
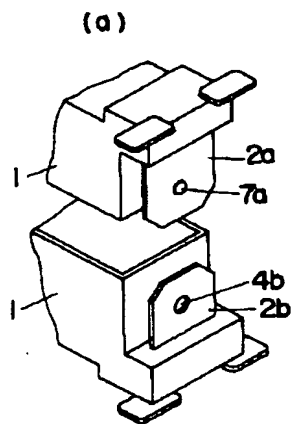
- 1 コネクタ
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[Drawing 2]

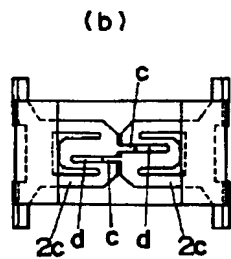
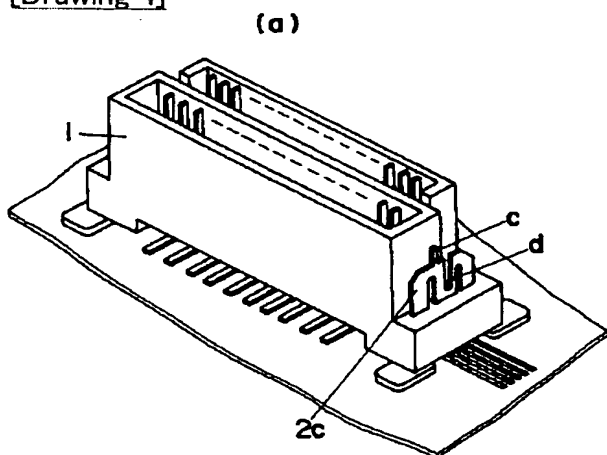


[Drawing 3]





[Drawing 4]



[Translation done.]



【物件名】

甲第四号証

【添付書類】

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(19) 日本国特許庁 (J P)

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23/68

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D 6901-5E

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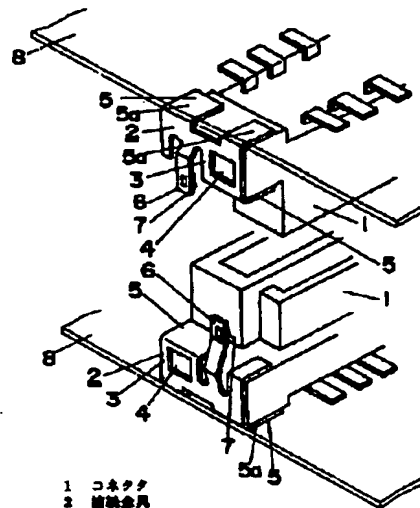
(74) 代理人 弁理士 石田 長七 (外2名)

(54) 【考案の名称】コネクタの接続構造

(57) 【要約】

【目的】接続金具を同一部品にしながら、接続強度を充分なものにする。

【構成】コ字型に形成する接続金具2の長さ方向の一端部における中央片3に係合孔4を穿設する。接続金具2の長さ方向の他側部における脚片5の一部を中央片3に略平行に起立させて起立接続片6を形成させる。この起立接続片6の先端部に係合凸部7を形成する。対向して電気的に接続するコネクタ1、1の端部にコ字型の上記接続金具2を抱持させて取付ける。一方のコネクタ1の接続金具2の起立接続片6の係合凸部7を他方のコネクタ1の接続金具2の中央片3の係合孔4に係合させて対向するコネクタ1、1を接続する。



- 1 コネクタ
- 2 接続金具
- 3 中央片
- 4 係合孔
- 5 脚片
- 6 起立接続片
- 7 係合凸部

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【実用新案登録請求の範囲】

【請求項1】コ字型に形成された接続金具の長さ方向の一端部における中央片に係合孔が穿設され、接続金具の長さ方向の他側部における脚片の一部が中央片に略平行に起立されて起立接続片が形成され、この起立接続片の先端部に係合凸部が形成され、対向して電氣的に接続されるコネクタの端部にコ字型の上記接続金具が抱持されて取付けられ、一方のコネクタの接続金具の起立接続片の係合凸部が他方のコネクタの接続金具の中央片の係合孔に係合されて対向するコネクタを接続して成るコネクタの接続構造。

【図面の簡単な説明】

【図1】本考案の一実施例の分解斜視図である。

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【図2】同上の接続状態の部分断面図である。

【図3】(a)(b)は従来例の分解斜視図、接続状態の部分断面図である。

【図4】(a)(b)は他の従来例の斜視図、接続状態の側面図である。

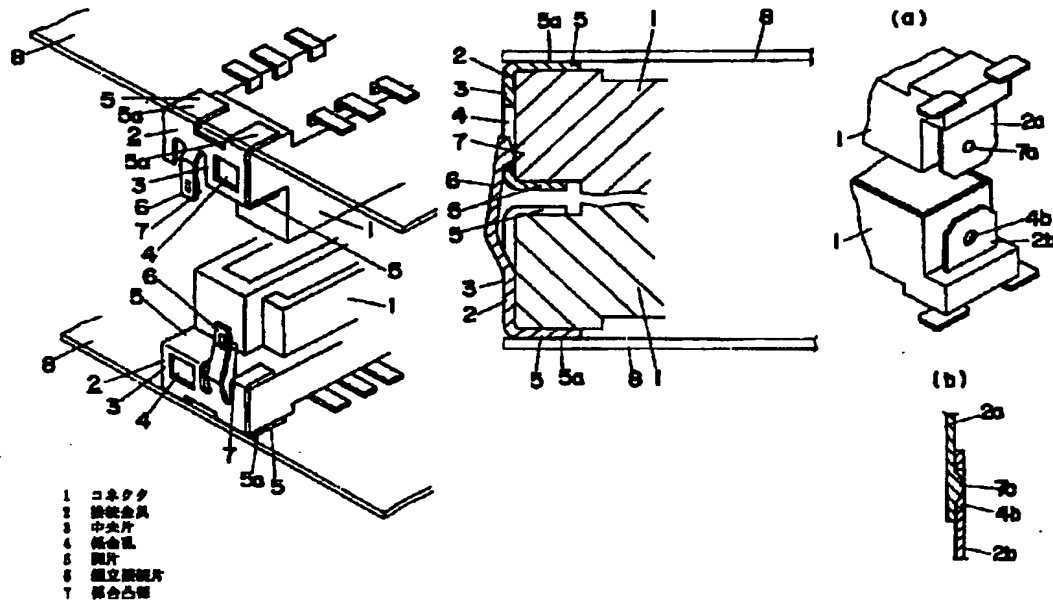
【符号の説明】

- 1 コネクタ
- 2 接続金具
- 3 中央片
- 4 係合孔
- 5 脚片
- 6 起立接続片
- 7 係合凸部

【図1】

【図2】

【図3】



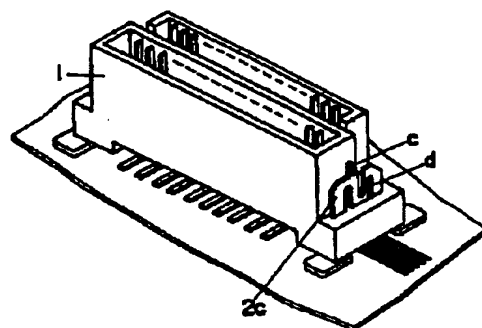


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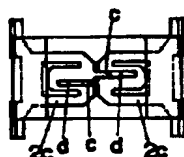
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【図4】

(a)



(b)





(4)

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## 【考案の詳細な説明】

## 【0001】

## 【産業上の利用分野】

本考案は、プリント配線板に実装されたコネクタを接続する構造に関し、詳しくは同一部品の接続金具にて接続強度を充分なものにしようとする技術に係るものである。

## 【0002】

## 【従来の技術】

従来、コネクタの接続構造は図3(a)(b)に示すように、コネクタ1に取付けられた一方の接続金具2aに係合凸部7aを形成し、他方のコネクタ1に取付けられた接続金具2bに係合孔4bが形成され、しかして、係合凸部7aに係合孔4bに係合することで、接続金具2a、2bを接続してコネクタ1、1同士を接続するものである。また、図4(a)(b)に示すように、接続金具2c、2cを同一形状にし、互いの差込み片cを相手側の係合溝dに差込み係合する構成のものも提案されている。

## 【0003】

## 【考案が解決しようとする課題】

ところが図3(a)(b)に示すものにおいては、接続金具2a、2b同士に係合連結することで接続強度を高め得るが、接続金具2a、2bが異なる部品になり、接続金具2a、2bのコネクタ1、1への取付けに注意を要し、部品点数も増し、そしてコネクタ1、1への接続金具2a、2bの取付け強度を高める措置をコネクタ1、1側において取らなければならず、コネクタ1、1の構成が複雑になるなどという問題があった。また、図4(a)(b)に示すものにおいては、接続金具2c、2cを同一形状にできるが、接続金具2c、2cの板厚の範囲において接続金具2c、2cを差込み接合するものであり、板厚のばらつきや取付け位置のばらつきにて、接続強度が低下し、接続強度を充分に高め難いという問題があった。

## 【0004】

本考案はこのような問題を解消しようとするものであり、その目的とするところ



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ろは、同一部品とした接続金具にて接続強度を充分なものにできるコネクタの接続構造を提供するにある。

【0005】

【課題を解決するための手段】

本考案は、コ字型に形成された接続金具2の長さ方向の一側部における中央片3に係合孔4が穿設され、接続金具2の長さ方向の他側部における脚片5の一部が中央片3に略平行に起立されて起立接続片6が形成され、この起立接続片6の先端部に係合凸部7が形成され、対向して電氣的に接続されるコネクタ1、1の端部にコ字型の上記接続金具2が抱持されて取付けられ、一方のコネクタ1の接続金具2の起立接続片6の係合凸部7が他方のコネクタ1の接続金具2の中央片3に係合孔4に係合されて対向するコネクタ1、1を接続して成ることを特徴とするものである。

【0006】

【作用】

このように、コ字型に形成された接続金具2の長さ方向の一側部における中央片3に係合孔4が穿設され、接続金具2の長さ方向の他側部における脚片5の一部が中央片3に略平行に起立されて起立接続片6が形成され、この起立接続片6の先端部に係合凸部7が形成され、対向して電氣的に接続されるコネクタ1、1の端部にコ字型の上記接続金具2が抱持されて取付けられ、一方のコネクタ1の接続金具2の起立接続片6の係合凸部7が他方のコネクタ1の接続金具2の中央片3に係合孔4に係合することで、つまり、接続金具2をコ字型に形成してコネクタ1に抱持させて、接続金具2のコネクタ1への取付け強度を充分なものにし、ながら、接続金具2の形状を同一形状にし、それでいて、起立接続片6の係合凸部7を中央片3の係合孔4に係合することで、接続強度も充分なものにしたものである。

【0007】

【実施例】

接続金具2は金属板をコ字型に曲成して形成されている。接続金具2の長さ方向の一側部における中央片3に係合孔4が穿設されている。接続金具2の長さ方



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向の他側部における脚片5の一部が中央片3に略平行に起立されて起立接続片6が形成されている。この起立接続片6の先端部に係合凸部7が形成されている。接続金具2はコネクタ1の端部に取付けられている。かかる場合、接続金具2の脚片5の面5aはコネクタ1におけるプリント配線板8への半田付け面に面一になされていて、かかる脚片5の面5aをプリント配線板8に半田付けすることで、コネクタ1のプリント配線板8への取付け強度を高めるようにして、プリント配線板8からコネクタ1が剥がされるのを抑制するものである。

【0008】

しかして、プリント配線板8に実装されているコネクタ1、1を対向させて、その端部の接続金具2の起立接続片6の係合凸部7を他方のコネクタ1の接続金具2の中央片3の係合孔4に係合させて対向するコネクタ1、1を接続するのである。かかる場合、コネクタ1、1は電気的に接続されているものである。そして接続金具2、2同士の接続にてプリント配線板8間のアース機能を果たしている。また、接続金具2、2同士の挿抜において、接続金具2がコネクタ1における半田付けの剥離を阻止するものである。

【0009】

このように、接続金具2をコ字型に形成してコネクタ1に抱持させて、接続金具2のコネクタ1への取付け強度を充分なものにしているのであり、そして、接続金具2の形状を同一形状にして、部品点数を軽減している。また、起立接続片6の係合凸部7を中央片3の係合孔4に係合することで、接続強度も充分なものにしている。

【0010】

## 【考案の効果】

本考案は上述のように、コ字型に形成された接続金具の長さ方向の一側部における中央片に係合孔が穿設され、接続金具の長さ方向の他側部における脚片の一部が中央片に略平行に起立されて起立接続片が形成され、この起立接続片の先端部に係合凸部が形成され、対向して電気的に接続されるコネクタの端部にコ字型の上記接続金具が抱持されて取付けられ、一方のコネクタの接続金具の起立接続片の係合凸部が他方のコネクタの接続金具の中央片の係合孔に係合するから、つ



(7)

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まり、接続金具をコ字型に形成してコネクタに抱持させて、接続金具のコネクタへの取付け強度を充分なものになしながら、接続金具の形状を同一形状にでき、それでいて、起立接続片の係合凸部を中央片の係合孔に係合することで、コネクタの接続強度も充分なものにできるという利点がある。